

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

UMEMOTO, et al.

Atty. Dck. No. 103213-00048

Serial No.: New Application

Examiner: unknown

Filed: Concurrently Herewith

Art Unit: unknown

For: DC/DC CONVERTER

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Date: June 30, 2003

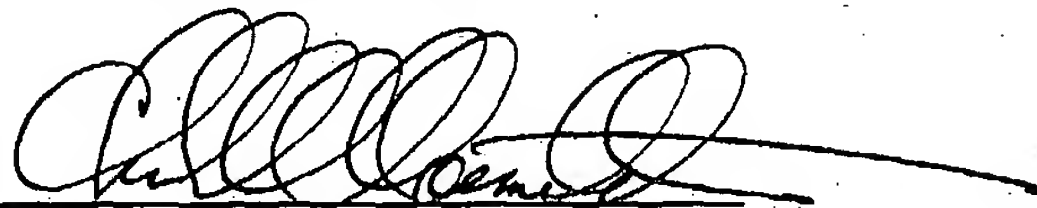
Sir:

Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the information item(s) listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each item(s) is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the item(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- XX 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date, OR (b) before the mailing date of a first Office Action on the merits in the present application, OR (c) accompanies a Request for Continued Examination. No certification or fee is required.
- ☐ 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance.
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(1).
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(2).

- ☐ c. A check in the amount of \$180.00 in payment of the fee under 37 CFR §1.17(p). Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300 as needed to ensure consideration of the disclosed information.
- ☐ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Applicant(s) hereby petition(s) that the Information Disclosure Statement be considered. Attached is our check in the amount of \$180.00 in payment of the petition fee under 37 CFR §1.17(i)(1). Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300 as needed to ensure consideration of the disclosed information.
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(1).
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(2).
- xx 4. An English-language Abstract(s) of the non-English language reference(s) are attached hereto.

Respectfully submitted,



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FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

103213-00048

SERIAL NO.

New

## LIST OF REFERENCES CITED BY APPLICANT

*(Use several sheets if necessary)*

APPLICANT

UMEMOTO, et al.

FILING DATE

June 30, 2003

GROUP

unknown

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION		
							YES	NO	PART.
	AG	07-298614	November 10, 1995	JAPAN					x
	AH								
	AI								
	AJ								
	AK								
	AL								

OTHER REFERENCES *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	AM	
	AN	
	AO	

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

## MATERIAL FOR INFORMATION DISCLOSURE STATEMENT

### List of Prior Art References

1. Japanese Patent Application Laid-Open No. H7-298614,  
laid-open on November 10, 1995

### Comments

#### **Reference 1**

This reference discloses a conventional technique of suppressing a rush current to a load at start-up by the use of a soft-start capacitor. By contrast, according to the present invention, a DC/DC converter that first finds the error voltage between the output voltage and a first reference voltage and that then controls the output current according to the differential voltage between the error voltage and a second reference voltage is so configured as to use, as the first reference voltage, whichever of a variable reference voltage and a first constant reference voltage is lower and, as the second reference voltage, whichever of the variable reference voltage and a second constant reference voltage is lower. With this circuit configuration, it is possible to reduce an overshoot or undershoot in the output voltage as may occur when the DC/DC converter is soft-started.